

Thorel 595 (B).

GLOSSOCARYA SIAMENSIS var. *PUBESCENS* Mold., *Phytologia* 34: 19. 1976.

Bibliography: Mold., *Phytologia* 34: 19 & 264. 1976; Mold., *Phytol. Mem.* 2: 286 & 549. 1980.

This variety differs from the typical form of the species in having the pubescence throughout the inflorescences far more dense, conspicuous, and spreading and the lower leaf-surfaces more or less distinctly spreading-pilose-pubescent, especially on the larger venation.

The variety is based on *Maxwell* 71-487 from a dense thicket along a trail at Howa Pie, Angthong, Thailand, collected on August 15, 1971, and deposited in the Aarhus University herbarium. Thus far it is known only from the original collection.

Citations: THAILAND: *Maxwell* 71-487 (Ac--type).

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NOTES ON THE GENUS *HYMENOPYRAMIS* (VERBENACEAE)

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It being manifestly impractical to attempt the formal monograph of this genus so long planned and previously announced, only the bibliographic and herbarium notes assembled by my wife, Alma L. Moldenke, and myself over the past 52 years are herewith placed on record for use by future monographers. This is the 76th genus thus far treated by us in this series of papers in this and certain other journals. The herbarium acronyms herein employed are the same those used in all of our previous papers in this series and are most recently explained in full in *Phytologia Memoirs* 2: 463--469 (1980) and *Phytologia* 50: 268 (1982).

HYMENOPYRAMIS Wall., *Numer. List* [25], no. 774, hyponym. 1829; W. Griff., *Calcut. Journ. Nat. Hist.* 3: 365. 1843.

Synonymy: *Hymenolepis* Craib ex Mold., *Résumé Suppl.* 3: 32, in syn. 1962 [not *Hymenolepis* Cass., 1817, nor Kaulff., 1824]. *Hymenopyramis* "Wall. ex Griff." apud Airy Shaw in J. C. Willis, *Dict. Flow. Pl.*, ed. 7, 568. 1966. *Hymenospyranis* Wall. ex Mold., *Phytologia* 23: 432, in syn. 1972. *Hymenofyranus* Wall. ex Mold., *Phytologia* 23: 432, in syn. 1972.

Bibliography: Wall., *Numer. List* [25], no. 774. 1829; Endl., *Gen. Pl.* 638. 1838; Sweet, *Hort. Brit.*, ed. 3, 764. 1839; Meisn., *Pl. Vasc. Gen. Comm.* 2: 197. 1840; Spach, *Hist. Nat. Vég. Phan.* 9: 228. 1840; Steud., *Nom. Bot. Phan.*, ed. 2, 1: 784. 1840; Reichenb., *Deutsch. Bot. [Repert. Herb. Nom.]* 108. 1841; W. Griff., *Calcut. Journ. Nat. Hist.* 3: 365. 1843; Voigt, *Hort. Suburb. Calc.* 464 & 472. 1845; Walp., *Repert. Bot. Syst.* 4: 133. 1845; Lindl., *Veg. Kingd.*, ed. 1, 664 (1846) and ed. 2, 664. 1847; Schau. in A. DC.,

Prodr. 11: 626. 1847; A. L. Juss. in Orbigny, Dict. Univ. Hist. Nat. 13: 185. 1849; Lindl., Veg. Kingd., ed. 3, 664. 1853; Schnitzl., Iconog. Fam. Nat. Reg. Veg. 2: 137 Verbenac. [3]. 1856; Miq., Fl. Ind. Bat. 2: 858 & 903. 1858; Bocq., Adansonia, ser. 1, 2: 87, 113, 117, 124, 126, 128, 129, 143, 144, 146, 148, & 158 (1862) and 3: [Rev. Verbenac.] 112, 179, 180, 183, 208--209, & pl. 11, fig. 1--10. 1863; Pfeiffer, Nom. Bot. 1 (2): 1710. 1874; Benth. in Benth. & Hook. f., Gen. Pl. 2 (2): 1136 & 1158. 1876; Kurz, Forest Fl. Brit. Burma 2: 252 & 258. 1877; Gamble, Man. Indian Timb., ed. 1, 281, 282, & 511. 1881; C. B. Clarke in Hook. f., Fl. Brit. India 4: 561 & 598. 1885; Durand, Ind. Gen. Phan. 322. 1888; Baill., Hist. Pl. 11: 88 & 117 (1891) and 11: 490. 1892; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 1189. 1893; Briq. in Engl. & Prantl., Nat. Pflanzenfam., ed. 1, 4 (3a): 133, 136--138, 176, 177, & 179, fig. 66 H & J (1895) and 4 (sa): 382. 1897; Gamble, Man. Indian Timb., ed. 2, imp. 1, 524 & 545. 1902; Dalla Torre & Harms, Gen. Siphonog., imp. 1, 433. 1904; Post & Kuntze, Lexicon 292 & 688. 1904; Brandis, Indian Trees, imp. 1, 502 & 505. 1906; Craib, Kew Bull. Misc. Inf. 1911: 445 (1911) and 1912: 154--155. 1912; Craib, Contrib. Fl. Siam Dicot. 166--167. 1912; Fedde & Schust., Justs Bot. Jahresber. 40 (2): 335. 1915; H. Hallier, Meded. Rijks Herb. Leid. 37: 86. 1918; Prain, Ind. Kew. Suppl. 5, imp. 1, 138. 1921; Craib, Kew Bull. Misc. Inf. 1922: 240--241. 1922; Gamble, Man. Indian Timb., ed. 2, imp. 2, 524. 1922; Wangerin, Justs Bot. Jahresber. 46 (1): 717. 1926; A. W. Hill, Ind. Kew. Suppl. 7: 124. 1929; Stapf, Ind. Lond. 3: 464. 1930; Junell, Symb. Bot. Upsal. 1 (4): 95, 98, & 201--202, fig. 149 & 150. 1934; Fedde & Schust., Justs Bot. Jahresber. 53 (1): 1074. 1932; Dop in Lecomte, Fl. Gén. Indo-chine 4: 776 (1935) and 4: 887--891, fig. 91 (4--6). 1936; Fletcher, Kew Bull. Misc. Inf. 1937: 274 (1937) and 1938: 206, 401, 405--409, & 438--439. 1938; Worsdell, Ind. Lond. Suppl. 1: 493. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 54, 55, 59, 60, 73, & 93. 1942; Lemée, Dict. Descrip. Syn. Gen. Pl. Phan. 8b: 657. 1943; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 1189. 1946; Hill & Salisb., Ind. Kew. Suppl. 10: 116. 1947; H. N. & A. L. Mold., Pl. Life 2: 23, 24, & 34. 1948; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 127, 129, 136, 138, 160, & 186. 1949; Mold., Phytologia 5: 339--340. 1956; Iljin, Acad. Sci. Bot. Inst. Dept. Repr. Mat. Hist. Fl. Veg. USSR 3: 216. 1958; Mold., Résumé 163, 166, 176, 178, 219, 414, & 457. 1959; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 3, 1: 1189. 1960; Prain, Ind. Kew. Suppl. 5, imp. 2, 138. 1960; Turrill, Curtis Bot. Mag. 173: pl. 355. 1960; Mold., Résumé Suppl. 3: 19, 20, 23, & 32. 1962; Dalla Torre & Harms, Gen. Siphonog., imp. 2, 433. 1963; Mold., Dansk Bot. Arkiv 23: 91. 1963; Airy Shaw, Kew Bull. Misc. Inf. 1965: 266 & 267. 1965; F. A. Barkley, List Ord. Fam. Anthoph. 76 & 174. 1965; Sen & Naskar, Bull. Bot. Surv. India 7: 48. 1965; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 7, 568. 1966; G. Taylor, Ind. Kew. Suppl. 13: 71 & 149. 1966; Mold., Résumé Suppl. 15: 10 (1967) and 16: 23. 1968; Rouleau, Guide Ind. Kew. 96 & 352. 1970; Mold., Phytologia 20: 78. 1970; Brandis, Indian Trees, imp. 2, 502 & 505. 1971; Mold., Biol. Abstr. 52: 1316

(1971) and 52 (3): B.A.S.I.C. S.114. 1971; Mold., Excerpt. Bot. A.18: 445. 1971; Mold., Fifth Summ. 1: 276, 283, 296, 301, & 363 (1971) and 2: 881. 1971; Mold., Phytologia 20: 507. 1971; Mukhopadhyay, Pollen Morph. Verb. [thesis]. 1971; Gamble, Man. Indian Timb., ed. 2, imp. 3, 524 & 545. 1972; Mold., Phytologia 23: 432. 1972; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 8, 582. 1973; Mold., Phytologia 26: 355, 356, 365, & 505. 1973; Thanikaimoni, Inst. Franç. Pond. Trav. Sect. Scient. Techn. 12 (2): 65. 1973; Heslop-Harrison, Ind. Kew. Suppl. 15: 70. 1974; Mold., Biol. Abstr. 57: 1898. 1974; Hocking, Excerpt. Bot. A.25: 378. 1975; Mold., Phytologia 34: 274 & 505. 1976; Thanikaimoni, Inst. Franç. Pond. Trav. Sect. Scient. Techn. 13: 120 & 328. 1976; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 41, 45, & 47. 1978; Mold., Phytol. Mem. 2: 263, 273, 286, 289, 290, 293, 354, 412, & 550. 1980; Mold., Phytologia 45: 343 & 507 (1980), 47: 335 & 507 (1981), 48: 122 & 508 (1981), and 50: 252. 1982.

Large, rambling or somewhat scandent shrubs; branches elongate, subtetragonal, at least the younger parts more or less canescent or gray-tomentose; leaves simple, deciduous, membranous or herbaceous, decussate-opposite, penninerved, exstipulate, isophyllous, mostly rather long-petiolate, marginally entire; inflorescence mostly rather large, axillary or terminal, determinate, cymose, pyramidal, brachiate, pedunculate, usually loose or sometimes dense, many-flowered; bracts very small to minute; flowers very small, subactinomorphic or slightly zygomorphic, 4-merous, grouped in mostly rather isolated glomerules axillary to the bracts; calyx very small, gamosepalous, cupuliform, subactinomorphic or slightly irregular, shortly 4-toothed or 4-fid, the teeth slightly unequal, the 2 anterior ones longer than the 2 posterior ones; corolla gamopetalous, hypocrateriform or subinfundibular, somewhat irregular, the tube short, cylindric, usually about equaling the calyx, apically ampliate, the limb oblique, 4-lobed, the lobes equal to slightly or greatly unequal, alternate with the calyx-lobes, the anterior one innermost in prefloration and larger than the others, the posterior one shortest, the lateral ones partly interior and partly exterior; stamens 4, inserted in the throat or at the base of the corolla-tube, exserted, isometrous, didynamous, alternate with the petals, the anterior ones inserted lower than the posterior ones; filaments capillary, sinuous in bud; anthers erect, ovate, 2-celled, the thecae parallel but unequal, longitudinally dehiscent by means of a slit, introrse, attached above their middle to a glandulose connective; pistil solitary, bicarpellary; style terminal, capillary or filiform, exserted, glabrous, sinuous in bud; stigma bifid, the lobes subulate, short, divergent, unequal, the anterior one larger; ovary single, compound, superior, situated at the base of the calyx, 1-celled or incompletely 2-celled, globose, apically externally glandulose, with parietal placentae, each cell bilamellate and biovulate; ovules subterminal, pendent from near the apex, semi-anatropous; fruiting-calyx greatly enlarged, chartaceous to membranous or hyaline, inflated, utriculose to saccate, reticulate-venose, broadly 4-winged, whitish

or greenish, apically more or less closed, the wings usually circular and unequal; fruit a small capsule, globular or ovoid to obovoid, enclosed by the fruiting-calyx, 4-valved, the valves deciduous, crustaceous, oblong-ovoid or obovoid-oblong, externally pilose or villosulous, attached to a central, 4-winged, axile, placental column, the inflexed margins holding the seeds, at first loculicidal, later septicidal; mesocarp reduced to a dry membrane, the 4 incomplete pyrenes each one-seeded; seeds more or less pendent (like the ovules), 3-angled or subtriquetrous, the testa hard; endosperm absent; embryo slightly curvate; cotyledons 2, elliptic; radicle inferior; chalaza superior.

Type species: *Hymenopyramis brachiata* Wall.

This is a small and distinct genus of about 8 recognized taxa, native to India, Burma, Thailand, Cambodia, Laos, and Vietnam; one species sometimes cultivated in botanical gardens or other fine collections. The generic name is derived from $\mu\eta\mu\eta$, a membrane, and $\pi\upsilon\rho\alpha\mu\iota\varsigma$ a pyramid.

Walpers (1845) recognized only the type species, which he credited to eastern and central India; Miquel (1858) also knew only this one species, which Durand (1888) ascribed to the Himalaya region. Benthams (1876) recognized "1 or 2?" species native to the Himalayas "from Kumaon to Burma". Dalla Torre & Harms (1904) recognized only a single species from "eastern India to Burma"; Briquet (1895) also knew only one species "in den himalayischen Bergzügen vorder Indiens und Birmas". Dop (1935) recognized 3 species from India and Indochina; Angely (1956) raised the number to 6 species.

Baillon (1891) asserts that the genus' closest relationship is with the genus *Callicarpa* L. and *Premna* L.

Bocquillon (1862-1863) says concerning the ovary: "des fausses cloisons antérieure et postérieure s'avancent des parois de l'ovaire entre les placentas". Also "Le calice persistant et considérablement accru a la forme de quatre grandes ailes circulaires, membraneuses, inégales; il renferme la fruit, qui est poilu, sec, et se partage en quatre parties, d'abord par une déhiscence loculicide, puis par déhiscence septicide."

Junell (1934) tells us, on the basis of a Hort. Buitenzord collection and Wallich 774 at Berlin, that "Die Plazenten verwachsen im unteren Teil des Fruchtknotens. Die Fruchtblätter, die im oberen Teil des Gynäceums....verhältnismässig gross und mit gut ausgebildeten leitendem Gewebe versehen sind, werden nach unten zu kleiner. Im unteren Teil des Fruchtknotens....sind sie so reduziert, dass die beiden zu demselben Fruchtblatt gehörigen Samenanlagen dicht an einander liegen, d.h. zwischen den Samenanlagen ragt keine unvollständige Scheidewand von der Plazenta vor..... Der mikropylare Teil der Samenanlagen ist gegen die Medianlinie des Fruchtknotens gekrümmt. Die Frucht ist nur wenig kapselartig. Die Fruchtwand ist sehr hart und enthält typische Steinzellen. An der Oberfläche der abgerundeten Frucht kann man die Grenzen zwischen den einzelnen Klappen kaum sehen, und es ist bei dieser Gattung bedeutend schwerer als bei der vorhergehenden Gattung, die Frucht zum Zerfall in diese Klappen zu bringen.....Die Früchte von *Hymenopyramis*, welche ich untersucht habe, lassen sich jedoch nur schwierig

in vier Teile teilen."

The *Hymenolepis* Cass. (1817), referred to in the synonymy (above), is a synonym of *Athanasia* L. in the *Carduaceae*, while *Hymenolepis* Kaulff. (1824) is *Belvisia* Mirbel in the *Polypodiaceae*.

It is perhaps worth mentioning here that the Endlicher (1838) reference in the bibliography of *Hymenopyramis* is often cited as "1836--1856", the title-page date, but the page involved here was actually issued in 1838; similarly the Schnitzlein reference is usually cited as "1843--1870", but our page was issued in 1856. The Miquel (1858) reference is sometimes cited as "1856", the title-page date, or as "1857", but, again, the page herein involved was issued in 1858. Baillon's *Hist. Pl.* 11: 88 & 117 were issued in 1891, not in "1892" as were the later pages. Wallich's original publication of the generic name was issued in 1829, not in "1831" as sometimes cited.

According to Sweet (1839) the type species of *Hymenopyramis* was introduced into cultivation in England in 1832 from the "E. Indies", but surely it was "eastern India" that was intended.

An artificial key to the accepted taxa:

1. Utricle at least 2 cm. long and up to 4 cm. long when mature.
2. Utricle almost glabrous; leaf-blades with a thick, short, appressed tomentum beneath and with numerous, sessile, amber-colored glands almost completely hidden by the tomentum.
3. Leaf-blades ovate to elliptic, to 15 cm. long. *H. vesiculosa*.
- 3a. Leaf-blades elliptic, only to 8 cm. long.
4. Leaf-blades apically conspicuously acuminate. *H. acuminata*.
- 4a. Leaf-blades apically mostly acute to obtuse, sometimes very shortly acuminate.
5. Upper surface of leaf-blades densely short-pubescent....
H. parvifolia.
- 5a. Upper surface of leaf-blades completely glabrous and nitid.....*H. parvifolia* var. *nitida*.
- 2a. Utricle conspicuously pubescent; leaf-blades with a thinner tomentum of longer hairs beneath, the numerous, sessile, amber-colored glands not hidden by the tomentum. *H. siamensis*.
- 1a. Utricle at most 2 cm. long.
6. Leaf-blades with a short tomentum of mostly brownish subappressed hairs beneath.
7. Utricle only scattered-pilosulous.....*H. brachiata*.
- 7a. Utricle very densely puberulent over its entire surface...
H. pubescens.
- 6a. Leaf-blades with a thick tomentum of longer white hairs beneath.....*H. cana*.

HYMENOPYRAMIS ACUMINATA Fletcher, Kew Bull. Misc. Inf. 1938: 206. 1938.

Bibliography: Fletcher, Kew Bull. Misc. Inf. 1938: 206, 401, & 438. 1938; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 60 & 93. 1942; Hill & Salisb., Ind. Kew. Suppl. 10: 116. 1947; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 138 & 186. 1949; Mold., Résumé

178 & 457. 1959; Mold., *Résumé Suppl.* 3: 19 & 20. 1962; Mold., *Fifth Summ.* 1: 296 & 301 (1971) and 2: 881. 1971; Mold., *Phytol. Mem.* 2: 286, 293, & 550. 1980; Mold., *Phytologia* 50: 252. 1982.

A scandent shrub or woody climber, to 3 m. tall; branchlets obtusely tetragonal, gray-brown, glabrous except for a few hairs at the nodes, few-lenticellate; leaves decussate-opposite; petioles 1 cm. long, pubescent and slightly canaliculate above; leaf-blades rigidly chartaceous, olive-green and brown-tinted above, elliptic or subobovate, 5--8 cm. long, 2--5.5 cm. wide, apically very acuminate, basally cuneate, marginally entire and glabrous, glabrous above except for the tomentose base of the midrib, whitish or gray and green-tinged beneath and glandular-tomentose, the tomentum short, thick, and appressed, the numerous, sessile, amber-colored glands almost completely hidden by the tomentum; midrib and the 4 or 5 pairs of secondaries conspicuous above; midrib prominent beneath; secondaries parallel, prominulous beneath; tertiaries strong, numerous, parallel; panicles axillary or terminal, foliose, 15--28 cm. long, basally 15--24 cm. wide, the principle branches 8--12 cm. long; flowers fragrant; calyx yellow-green; corolla and filaments white; utricle inflated, ovoid, yellow-green, 2--3 cm. long, acutely 4-winged, glabrous or sparsely pubescent and glandulose; capsule obovoid, about 5 mm. long, 3--5 mm. wide, externally fulvous-hirsute, with numerous, sessile, amber-colored glands especially apically.

This species is based on Kerr 17917 from an evergreen forest, under 50 m. altitude, at Krat, Kao Saming, Thailand. Fletcher (1938) comments that the species is related to *H. siamensis* Craib, but differs in its smaller leaves, which are apically more acuminate, with the lower surface more shortly tomentose, the glands almost completely hidden, and the almost glabrous utricle. He cites only the type collection.

Collectors have encountered this plant in mostly open areas in deciduous forests, along trails, and both in and at the margins of evergreen forests, as well as "scattered in dry evergreen forests on hillsides", at under 50 to 800 m. altitude, in flower in February, June, and August, and in fruit in June, August, and December.

Material has been misidentified and distributed in some herbaria as *H. brachiata* Wall. and as *H. cana* Craib.

Citations: THAILAND: K. Larsen 9878 (Lw); Larsen, Larsen, Nielsen, & Santisuk 31664 (Ac), 31930 (Ac, Z); J. F. Maxwell 74-828 (Ac), 75-135 (Ac); Phengkhilai 585 (Cp). LAOS: Thorel 2440 (Ca--54796, Z).

HYMENOPYRAMIS BRACHIATA Wall., *Numer. List* [25], no. 774, hyponym. 1829; W. Griff., *Calcut. Journ. Nat. Hist.* 3: 365. 1843.

Synonyms: *Hymenospyranis brachiata* Wall. ex Mold., *Phytologia* 23: 432, in syn. 1972. *Hymenopyramis brachiata* "Wall. ex Kurz" ex Mold., *Phytol. Mem.* 2: 412, in syn. 1980.

Bibliography: Wall., *Numer. List* [25], no. 774. 1829; Sweet, *Hort. Brit.*, ed. 3, 764. 1839; Steud., *Nom. Bot. Phan.*, ed. 2, 1: 784. 1840; W. Griff., *Calcut. Journ. Nat. Hist.* 3: 365. 1843; Voigt, *Hort. Suburb. Calc.* 472. 1845; Walp., *Repert. Bot. Syst.* 4:

133. 1845; Schau. in A. DC., Prodr. 11: 626. 1847; Miq., Fl. Ned. Ind. 2: 903. 1858; Bocq., Adansonia, ser. 1, 2: 113 & 129, pl. 11, fig. 1--10. 1862; Bocq., Rev. Verbenac. 113 & 129, pl. 11, fig. 1--10. 1863; Kurz, Forest Fl. Brit. Burma 2: 258. 1877; Gamble, an. Indian Timb., ed. 1, 282 & 511. 1881; C. B. Clarke in Hook. f., Fl. Brit. India 4: 598. 1885; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 1, 1: 1189. 1893; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 176 & 179, fig. 66 H & J. 1895; Gamble, Man. Indian Timb., ed. 2, imp. 1, 545. 1902; Brandis, Indian Trees, imp. 1, 505. 1906; Craib, Kew Bull. Misc. Inf. 1911: 445. 1911; Craib, Contrib. Fl. Siam Dicot. 166. 1912; H. Hallier, Meded. Rijks Herb. Leid. 37: 86. 1918; Craib, Kew Bull. Misc. Inf. 1922: 240. 1922; Stapf, Ind. Lond. 3: 401. 1930; Junell, Symb. Bot. Upsal. 1 (4): 95 & 98, fig. 149 & 150. 1934; Dop in Lecomte, Fl. Gén. Indo-chine 4: 889--890. 1935; Fletcher, Kew Bull. Misc. Inf. 1938: 401, 405, 438, & 439. 1938; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 54, 55, 59, 60, 73, & 93. 1942; Jacks. in Hook. f. & Jacks., Ind. Kew., imp. 2, 1: 1189. 1946; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 127, 129, 136, 138, 160, & 186. 1949; Mold., Résumé 163, 166, 176, 178, 219, & 457. 1959; Sen & Naskar, Bull. Bot. Surv. India 7: 48. 1965; G. Taylor, Ind. Kew. Suppl. 13: 71. 1966; Brandis, Indian Trees, imp. 2, 505. 1971; Mold., Fifth Summ. 1: 276, 283, 296, 301, & 363 (1971) and 2: 88;. 1971; Gamble, Man. Indian Timb., ed. 2, imp. 2, 545. 1972; Mold., Phytologia 23: 432 (1972) and 34: 274. 1976; Mold., Phytol. Mem. 2: 263, 273, 286, 293, 354, 412, & 550. 1980.

Illustrations: Bocq., Adansonia, ser. 1, 2: pl. 11, fig. 1--10. 1862; Bocq., Rev. Verbenac. pl. 11, fig. 1--10. 1863; Briq. in Engl. & Prantl, Nat. Pflanzenfam., ed. 1, 4 (3a): 176, fig. 66 H & J. 1895; Junell, Symb. Bot. Upsal. 1 (4): 95, fig. 149 & 150. 1934.

A large extensively scandent or rambling, rarely creeping, deciduous shrub, about 3 m. tall, or rarely a small tree, 4--6 m. tall; trunk to 25 cm. in diameter, the blaze tan over brown; branches elongate, gray-tomentose; branchlets brachiate, grayish-velvety or -strigose; leaves decussate-opposite, short-petiolate; petioles slender, 8--14 mm. long, densely puberulent; leaf-blades subchartaceous to membranous, ovate to ovate-lanceolate or ovate-oblong, 7.5--12.5 cm. long, 1.2--1.5 cm. wide, apically acuminate, marginally entire, basally obtuse to more or less acute or rhomboid, glabrous or glabrate above when mature, gray-pubescent or -tomentose beneath, the tomentum short, brownish, and rather appressed; inflorescence axillary or terminal, the terminal panicles pyramidal, large, to 30 cm. long and 20 cm. wide, lax, brachiate, basally leafy, gray-tomentose or -puberulent throughout, composed of small, many-flowered, dichotomous, often compact cymes, borne usually at the ends of branchlets or in the axils of the upper leaves; bractlets very small; flowers small or very small; peduncles capillary, short during anthesis but 8--10 mm. long in fruit; calyx minute, about 1 mm. long during anthesis, 4-fid; corolla obliquely campanulate, white or cream-color to greenish, about 3 mm. long, the tube cylindric, externally pubescent, the limb obliquely 4-fid or 4-lobed;

stamens 4, exserted; anthers ovate, the thecae parallel; style filiform; stigma shortly bifid; ovary 2-celled, 4-ovulate; fruiting-calyx greatly accrescent, the utricle oblong or ovoid, not over 2 cm. long, 8--13 mm. wide, ventricose, membranous or chartaceous, venose, externally minutely scattered-pilous, acutely 4-alate, the mouth very small to minute; capsule small, obovoid or globular, 3--4 mm. long, completely encircled and included by the utricle, externally pilose or fulvous-hirsute to lanate, resinous-punctate, 4-valvular, the valves obovoid-oblong, their margin inflexed and holding the seeds; seeds pendulous, triquetrous.

This species is based on Wallich 774 from Taong Doug on the Irawaddy river in Upper Burma, collected in 1826. Kurz (1877) and Gamble (1902) record it from dry forests in the Prome area. Clarke (1885) cites only the Wallich type, listing the species from Pegu and Ava, as well as cultivated in northern and central India. Dop (1935) cites unnumbered Kerr and Vanpruk collections from Thailand and one of Pierre from Cochinchina. Hallier (1918) cites his C.246 from cultivated material in Sri Lanka, deposited in the Hamburg herbarium. Sen & Naskar (1965) also list it as cultivated in India. Griffith (1843) lists it from central eastern India. Jackson (1893) avers that the type was from Burma. Bocquillon (1862) cites a Gaudin collection in the Paris and "Les" herbaria. Schauer (1847) asserts that he saw only a specimen in the DeCandolle herbarium "ab illi coetu mercat. Ind. or. comm." [probably the Wallich type]. Craib (1911) cites Kerr 2017 & 2017a and Vanpruk 178 from Thailand.

Fletcher (1938) cites from Thailand: Collins 248, 539, 1263, 1525, & 1577, Kerr 2017, 2017a, 5721, 10742, 16146, 19634, & 20515, Lakshnakara 1040 & s.n., Marcan 363, 1364, & 2485, Noe 131, and Vanpruk 178, listing the species as from northern and central India, Burma, and Cochinchina, as well as Thailand.

It would appear that *H. brachiata* is cultivated (and perhaps native) in northern and central India and certainly native from Upper Burma and Thailand to Indochina, occasionally cultivated as a specimen plant in Sri Lanka, Java, England, and perhaps elsewhere. Sweet (1839) asserts that it was introduced to English gardens in 1832 from the "E. Indies" [apparently an error for Eastern India].

Collectors have encountered this species in light evergreen or deciduous forests, disturbed mixed deciduous and bamboo forests, in seaside scrub and limestone-loving scrub, and in hedgerows, from 2--120 m. altitude, in flower from March to June, August, and November, and in fruit in January, March, October, and December. Bunpheng reports it "common in dry evergreen forests" in Thailand.

The corollas are said to have been "white" on Geesink & al. 5589, Huk s.n., and Nafday 119 and "greenish" on Bunpheng 215. Dop (1935) asserts that the stamens of *H. brachiata* are only shortly exserted, while those of the related *H. cana* are long-exserted.

Vernacular and common names reported for *H. brachiata* are "armed hymenopyramis", "chin-thea-lek-nway", "chintheleinevè", "chintheletneve", "kongkang", "konkang", and "kua kha pua".

The gynoecium morphology notes given under the genus as a whole

(above) were based on material apparently representing *H. brachiata*.

Material of *H. brachiata* has been misidentified and distributed in some herbaria as *H. cana* Craib and even as *Iodes* sp. On the other hand, the Maxwell 74-828 & 75-135, distributed as *H. brachiata*, actually represents *H. acuminata* Fletcher, while King 5418, 5423, & 5500 and Maxwell 74-770 are *H. cana* Craib, Shimizu & al. T.8760 is *H. parvifolia* Mold., Maxwell 73-459 is *H. pubescens* Mold., Shimizu & al. T.10706 is *H. siamensis* Craib, and Collins 1263 is something in the Lauraceae.

Citations: BURMA: Huk s.n. [8-10-1890] (W--389422); Kurz 2384 (W--389421); Mokim 160 (Pd); Rock 927 (W--1090559). THAILAND: Bunpheng 215 [Herb. Roy. Forest Dept. 8339] (Z); Collins 539 (W--1700588), 1525 (W--1701259), 1577 (W--1701287); Geesink, Phani-chapol, & Santisuk 5589 (Ac); Kasim bin Rajad 734 (Kl--1734); Rock 639 (W--1090421). VIETNAM: Cochinchina: Thorel 9440 (B). CULTIVATED: India: Herb. Harvey s.n. [h. Calcutta] (Du--166525 in part); Herb. Hort. Bot. Calcutt. s.n. (Bz--21394, Mu--1086, Mu--1164, Pd, T); Koelz 10408 (Ba, Mu); Nafday 119 (Ba). Java: Herb. Hort. Bot. Bogor. XV.E.66 (Bz--26274, Bz--26556, N), XF.28a (Bz--21388, Bz--21389, Bz--21390, Bz--21392, Bz--21393, Bz--25590, Bz--25591), XI.I.30 (Bz, Bz, Bz, N), XI.I.31 (Bz--25835, Bz), XI.I.33 (Bz--25836, Bz, Bz, N), s.n. (Bz--21391). Sri Lanka: Collector undetermined 125/54 (Pd), (Pd, Pd).

HYMENOPYRAMIS CANA Craib, Kew Bull. Misc. Inf. 1922: 240--241. 1922.

Bibliography: Craib, Kew Bull. Misc. Inf. 1922: 240--241. 1922; A. W. Hill, Ind. Kew. Suppl. 7: 124. 1929; Fedde & Schust., Justs Bot. Jahresber. 53 (1): 1074. 1932; Dop in Lecomte, Fl. Gén. Indochine 4: 889--890. 1935; Fletcher, Kew Bull. Misc. Inf. 1938: 401, 405, 407, 438, & 439. 1938; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59, 60, & 93 (1942) and ed. 2, 136, 138, & 186. 1949; Mold., Résumé 176, 178, & 457. 1959; Mold., Dansk Bot. Arkiv 23: 91. 1963; Mold., Fifth Summ. 1: 296 & 301 (1971) and 2: 881. 1971; Mold., Phytol. Mem. 2: 286, 289, 290, & 550. 1980.

An often subsacandent shrub, 1--5 m. tall, fairly large liana, or small tree with long rambling branches; branchlets tetragonal, 4-sulcate, at first more or less appressed-crisped-pubescent, soon merely puberulent; bark gray-brown, with elongated lenticels more or less arranged in lines; leaves decussate-opposite; leaf-blades rigidly chartaceous or subcoriaceous, elliptic-ovate or ovate, rarely lanceolate or obovate, to 9 cm. long and 5.2 cm. wide, apically acutely acuminate, marginally entire, basally cuneate or rounded-cuneate, green when fresh but fuscous above in drying and puberulent on the midrib, incanous beneath with a thick tomentum of long white hairs; midrib and the 5 or 6 pairs of very slender and straight secondaries impressed above, prominent beneath; tertiaries transverse, the veinlet reticulation invisible; inflorescence like that of *H. brachiata*; flowers scented like *Tetracera*; corolla white or greenish; stamens only slightly exserted; fruiting-calyx

inflated, about 1 cm. long, similar to that of *H. brachiata*, yellow-green; fruit about 4 mm. long, externally hirsute and glandulose.

This species is based on Kerr 4637 from on and among rocks, at 400 m. altitude, at the Me Ping rapids, Keng Soi, Thailand. Craib (1922) asserts that the species differs from *H. brachiata* in the leaf-blades being white [with a longer thick tomentum] beneath. It is apparently native to Thailand, Cambodia, and Laos. Fletcher (1938) cites only Kerr 4637 and *Lakshnakara 1010* from Thailand. Dop (1935) cites unnumbered collections of Thorel from Laos, Evrard and Poilane from Annam, Poilane from Cambodia, and Kerr from Thailand. According to Poilane, the Indochinese natives use it as a "c'endres mélangées à la pâte destinée à la confection des galettes".

Collectors have found the plant growing in sandy loam of clearings in mixed evergreen forests, in rocky deciduous/evergreen forests, in dry and deciduous forests, and among scrub vegetation, at 25--400 m. altitude, in flower from March to August and in December, in fruit in August, September, November, and December. Bunpheng records it as "common in deciduous forests" and Smitinand refers to it as "common in scrub forests". King found it to be "uncommon" in "open sun of ricefields with scattered shrubs and trees to 18 m. tall" and "in open sun of old fields consisting of spiny shrubs and small trees to 3 m. tall, the soil a gray-brown silty-clay". Wood vouchers accompany King 5418 & 5423.

Vernacular names recorded for the species are "kha pia", "kha pia", and "pa đông lians đông".

The corollas are described as having been "white" on most collections where the flower color is mentioned, but as "greenish" on King 5500.

Material of *H. cana* has been misidentified and distributed in some herbaria as *H. brachiata* Wall., *Premna* sp., and even as *Combretum acuminatum*. On the other hand, the Maxwell 72-224, distributed as *H. cana*, actually is *H. siamensis* Craib.

Citations: THAILAND: Bunpheng 1142 [Herb. Roy. Forest Dept. 21155] (Gg); Charoenmayu 397 [Herb. Roy. Forest Dept. 11521] (Z); Charoenphol, Larsen, & Warncke 4921 (Ac); Khit 28 (S); R. M. King 5418 (W--2435974), 5423 (Du--502252, W--2435970), 5500 (W--2435891); K. Larsen 8201 (Z); Larsen, Smitinand, & Warncke 1354 (Ac, Ld); Maxwell 74-239 (Ac), 74-770 (Ac); Rock 471 (W--1171274), 541 (W--1090376); Smitinand 5795 [Herb. Roy. Forest Dept. 24635] (Z). CAMBODIA: Pierre 933 (N); Poilane 22874 (N, S). LAOS: Vidal 1838 (Sm).

HYMENOPYRAMIS PARVIFOLIA Mold., Phytologia 5: 339--340. 1956.

Bibliography: Mold., Phytologia 5: 339--340. 1956; Mold., Résumé 178 & 457. 1959; G. Taylor, Ind. Kew. Suppl. 13: 71. 1966; Mold., Fifth Summ. 1: 296 (1971) and 2: 881. 1971; Mold., Phytologia 26: 355 & 356. 1973; Mold., Biol. Abstr. 57: 1898. 1974; Mold., Phytol. Mem. 2: 286 & 550. 1980.

A straggling shrub, to 3 m. tall, or woody climber, to 4 m. tall; branches slender, obtusely tetragonal, dark, minutely puber-

lent or glabrescent; branchlets slender, densely grayish- or fulvous-tomentellous throughout; principal internodes 1.3--5 cm. long; nodes not annulate; leaves decussate-opposite, small; petioles very slender, 2--8 mm. long, densely grayish- or fulvous-tomentellous like the branchlets; leaf-blades submembranous, elliptic, 2.5--5.5 cm. long, 1.8--3.4 cm. wide, varying apically from short-acuminate to rounded or even emarginate, marginally entire, basally short-acuminate, densely soft-pubescent above with more or less antrorsely appressed short hairs, very densely whitish-tomentellous beneath; midrib very slender, flat above, slightly prominulous beneath; secondaries very slender, about 3 per side, ascending, slightly arcuate at the margins, flat above, slightly prominulous beneath; veinlet reticulation obscure or indiscernible on both surfaces; inflorescence axillary, solitary, much shorter than the subtending leaves (except at the very apex of the branchlets where the leaves are reduced and bract-like during anthesis), 1--1.5 cm. long and wide during anthesis, rather densely few-flowered and subcapitate, very densely villosulous; peduncles very slender, 3--8 mm. long, very densely whitish- or fulvous-villosulous; pedicels obsolete or to 1 mm. long and densely villosulous; bractlets few, linear, 1--2 mm. long, densely villosulous; calyx campanulate, about 1 mm. long, externally very densely whitish-villosulous with somewhat antrorse hairs, its rim very minutely 4-denticulate, the teeth hidden by the hairs; corolla infundibular, white or whitish, about 2 mm. long, externally white-pubescent with more or less appressed short hairs, the tube very short, ampliate above into the spreading limb whose 4 lobes are about 0.5 mm. long and apically rounded; stamens 4, inserted in the corolla-tube, exerted about 3 mm. from the mouth; filaments filiform, glabrous; anthers oblong, about 0.3 mm. long; style exerted about 2 mm. from the corolla-mouth; stigma very small, bifid; fruiting-calyx much enlarged, membranous, ovate or angularly conic, 4--4.5 cm. long, 2.8--3 cm. wide, externally glabrous, venose, apically closed over the fruit, at first green, maturing white or whitish.

This species is based on *Bunpheng* 519 from a deciduous forest, about 300 m. altitude, at Pha Nok Khao, Chumphae, Kuawnkaen, in northeastern Thailand, collected on March 29, 1952, and deposited in my personal herbarium. The species is known thus far only from Thailand.

Collectors have found it growing on limestone mountains and in light deciduous forests. *Bunpheng* reports it "common" in deciduous and dry mixed evergreen forests. It has been encountered at 100--930 m. altitude, in anthesis in March, May, and July and in fruit in March, July, and September. Vernacular names reported for it are "ka pia", "kha pia", "mhark popepeb", and "pong lom".

Material of *Hymenopyramis parvifolia* has been misidentified and distributed in some herbaria as *H. brachiata* Wall.

Citations: THAILAND: *Bunpheng* 691 [Herb. Roy. Forest Dept. 11987] (Sm); *Dee* 443 [Herb. Roy. Forest Dept. 7743] (Ss), 519 [Herb. Roy. Forest Dept. 7744] (Z--type); *Kerr* 20657 (Ed); *Larsen & Larsen* 33757 (Ac, Z); *Native Collector* D1.112 [Herb. Roy. Forest Dept. 5912] (A); *Shimizu, Hutoh, & Chaiglom* T.8759 (Ac), 8760 (Ac).

HYMENOPYRAMIS PARVIFOLIA var. *NITIDA* Mold., *Phytologia* 26: 355. 1973.

Bibliography: Mold., *Phytologia* 26: 355 & 365. 1973; Mold., *Biol. Abstr.* 57: 1898. 1974; Hocking, *Excerpt. Bot. A.25*: 378. 1975; Mold., *Phytol. Mem.* 2: 286 & 550. 1980.

This variety differs from the typical form of the species in having the upper surface of its leaf-blades completely glabrous and very shiny.

The variety is based on *Larsen, Larsen, Nielsen, & Santisuk* 31821 from an open deciduous dipterocarp forest, at an altitude of 600 m., 15 km. northeast of Chaiyaphum, in eastern Thailand, collected on August 14, 1972, and deposited in the Herbarium Jutlandicum at Aarhus University.

Collectors describe the plant as a low shrub, 2--3 m. tall, and have found it growing at 200--600 m. altitude, flowering in August.

Citations: THAILAND: *Larsen, Larsen, Nielsen, & Santisuk* 31718 (Ac), 31821 (Ac--type, Z--isotype).

HYMENOPYRAMIS PUBESCENS Mold., *Phytologia* 20: 78. 1970.

Bibliography: Mold., *Phytologia* 20: 78. 1970; Mold., *Biol. Abstr.* 52: 1316 (1971) and 52 (3): B.A.S.I.C. S.114. 1971; Mold., *Excerpt. Bot. A.18*: 445. 1971; Mold., *Fifth Summ.* 1: 296 (1971) and 2: 881. 1971; *Heslop-Harrison, Ind. Kew. Suppl.* 15: 70. 1974; Mold., *Phytol. Mem.* 2: 286 & 550. 1980.

A climbing shrub; branches and branchlets obtusely tetragonal, the younger portions densely appressed-puberulent, the youngest parts more spreading-pubescent; leaves decussate-opposite; petioles about 1 cm. long, very densely appressed-pubescent; leaf-blades chartaceous, obovate-elliptic, 7--11 cm. long, 3.5--7.5 cm. wide, apparently apically acute, marginally entire, basally acute when immature but rounded-truncate when mature, very densely puberulent (under a hand lens) above, plainly and very densely short-pubescent beneath with fulvous hairs, more densely so on the larger venation; inflorescence axillary at the termination of the branchlets, forming a leafy panicle whose branches diverge at right angles to the rachis, very densely appressed-pubescent with fulvous-cinereous hairs throughout; utricle membranous, ovate, apparently to 1.5 cm. long and 1 cm. wide, externally very densely puberulent throughout with yellowish hairs; capsules extrinsically long-villous.

This species is based on *Larsen, Santisuk, & Warncke* 3409 from Nakhon Nayok, Sarika Falls, at an altitude of 300 m., in central Thailand, collected on August 14, 1968, and deposited in the Herbarium Jutlandicum at Aarhus University.

The species has been collected in fruit in August and October.

Material has been misidentified and distributed in some herbaria as *H. brachiata* Wall.

Citations: THAILAND: Larsen, Santisuk, & Warncke 3409 (Ac--type, Z--isotype); Maxwell 73-459 (Ac).

HYMENOPYRAMIS SIAMENSIS Craib, Kew Bull. Misc. Inf. 1912: 154--155. 1912.

Synonymy: *Hymenolepis siamensis* Craib ex Mold., Résumé Suppl. 3: 32, in syn. 1962. *Hymenofyranus siamensis* Wall. ex Mold., Phytologia 23: 432, in syn. 1972.

Bibliography: Craib, Kew Bull. Misc. Inf. 1912: 154--155. 1912; Craib, Contrib. Fl. Siam Dicot. 166--167. 1912; Fedde & Schust., Justs Bot. Jahresber. 40 (2): 335. 1915; Prain, Ind. Kew. Suppl. 5, imp. 1, 138. 1921; Dop in Lecomte, Fl. Gén. Indo-chine 4: 887 & 890--891, fig. 91 (4--6). 1935; Fletcher, Kew Bull. Misc. Inf. 1938: 205, 401, 405, 407, 408, 438, & 439. 1938; Worsdell, Ind. Lond. Suppl. 1: 493. 1941; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 59, 69, & 93 (1942) and ed. 2, 136, 138, & 186. 1949; Mold., Résumé 176, 178, & 457. 1959; Prain, Ind. Kew. Suppl. 5, imp. 2, 138. 1960; Mold., Résumé Suppl. 3: 32. 1962; Mold., Dansk Bot. Arkiv 23: 91. 1963; Mold., Fifth Summ. 1: 296 & 301 (1971) and 2: 531 & 881. 1971; Mold., Phytologia 23: 432. 1972; Mold., Phytol. Mem. 2: 286, 289, 290, 412, & 550. 1980.

Illustrations: Dop in Lecomte, Fl. Gen. Indo-chine 4: 887, fig. 91 (4--6). 1935.

A climbing shrub or subshrub or pyramidal treelet, 3--4 m. tall; branches striate, with alternate sides brown and pubescent, the other sides finely ferruginous-tomentose; branchlets stiff, spreading, subferruginous-tomentellous; lenticels in 8 regular lines; leaves decussate-opposite; petioles to 2.4 cm. long, curvate or arcuately deflexed, subferruginous-tomentellous or tomentose, with a few black hairs interspersed; leaf-blades chartaceous, more or less elliptic, 10--14 cm. long, 5--7.5 cm. wide, apically acute or acuminate, marginally entire, basally broadly cuneate or rounded, dark and sparsely brownish-pilosulous or pubescent above, especially on the venation, softly brown-pubescent and glandulose beneath, the tomentum of longer, stiffly erect, black hairs and thinner than in *H. acuminata* or *H. vesiculosa* and the numerous, sessile, amber-colored glands not hidden; midrib prominent; secondaries 12--16, slightly recurvate, slightly impressed above, prominent or prominulent beneath; tertiaries transverse, subparallel, slightly impressed above, prominulent beneath; veinlet reticulation indiscernible; inflorescence paniculate, terminal, 30--35 cm. long, 15--20 cm. wide, ferruginous-tomentose, its branches brachiate, the cymes many-flowered, dichotomous; bractlets very small; flowers very small; calyx about 1 mm. long, externally pubescent, the rim 4-toothed; corolla white, about 3 mm. long, externally pubescent, its tube about 2 mm. long, the lobes 1 mm. long, apically rounded; stamens very long-exserted,

inserted at the center of the corolla-tube; filaments 6--7 mm. long; style equaling the stamens; stigma bifid; ovary externally villous; fruiting pedicels almost 2 cm. long; utricle 4--6 cm. long, 2--3 cm. wide, basally cup-shaped, externally strongly pubescent throughout; fruit capsular, green or whitish, externally densely white-hirsute.

This species is based on Kerr 2087 from an evergreen forest, 30 m. altitude, at Sriracha, Nawngkaw, in the Prachinburi district, Thailand. The species is known thus far only from Thailand, Laos, and Cambodia. Craib (1912) states that it differs from *H. brachiata* Wall. by its different indument and much larger utricle.

Collectors have found the plant growing in evergreen and secondary evergreen forests, dense wet forests with bamboo, scrub, and sandy thickets, as well as along roadsides, at 24--650 m. altitude, in flower in February, April, May, July, September, and December, and in fruit in February, July, and November. Bunpheng refers to it as "common along the edges of evergreen forests" in Thailand. The only vernacular names recorded for it are "co nam an", "kha pia", and "wang sum".

Dop (1935) cites 5 unnumbered collections of Harmand, Poilane, and Spire from Laos, 3 of Harmand, Poilane, and Thorel from Cambodia, and one of Kerr from Thailand. Fletcher (1938) cites Collins 620, 1826, & 1855, Kerr 2087, and Marcan 1557 from Thailand.

Material of this species has been misidentified and distributed in some herbaria as *H. brachiata* Wall., *H. cana* Craib, and "*Homschioldia*" sp. On the other hand, the Maxwell 73-459, distributed as *H. siamensis*, actually is *H. pubescens* Mold.

Citations: THAILAND: Bunpheng 849 [Herb. Roy. Forest Dept. 14789] (Gg); Charoenphol, Larsen, & Warncke 4923 (Ac); Collins 1826 (W--1701483), 1855 (W--1701512); Kostermans 1163 (W--2039863); K. Larsen 10701 (Lw); Maxwell 72-224 (Ac), 74-259 (Ac); Shimizu, Koyama, & Nalampoon T.10706 (Ac, Ac); Sørensen, Larsen, & Hansen 6114 (Bm). CAMBODIA: Thorel 2262 (B, Ca--54792, F--photo, N--photo, S, Sg--photo, Z--photo). LAOS: Harmand s.n. (Ca--547931); Poilane 15719 (B); Vidal 1450 (Z), 6011 (W--2800871), 6031 (W--2800870).

HYMENOPYRAMIS VESICULOSA Fletcher, Kew Bull. Misc. Inf. 1938: 206--207. 1938.

Bibliography: Fletcher, Kew Bull. Misc. Inf. 1938: 206--207 & 438. 1938; Mold., Known Geogr. Distrib. Verbenac., ed. 1, 60 & 93. 1942; Hill & Salisb., Ind. Kew. Suppl. 10: 116. 1947; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 138 & 186. 1949; Mold., Résumé 178 & 457. 1959; Mold., Résumé Suppl. 15: 10. 1967; Mold., Fifth Summ. 1: 296 (1971) and 2: 881. 1971; Mold., Phytol. Mem. 286 & 550. 1980.

A scandent shrub; branchlets tetragonal, slightly pubescent or glabrous, covered with numerous prominently elevated lenticels; leaves decussate-opposite; petioles 1--1.2 cm. long, canaliculate above, at first conspicuously pubescent and somewhat glandulose, finally glabrous; leaf-blades rigidly chartaceous, ovate or ellip-

tic, 8--15 cm. long, 4--8 cm. wide, apically acutely acuminate, marginally entire, basally rounded or subcordate, tinted grayish-brown on both surfaces in drying, glabrous above, glandulose and tomentose beneath with a thick short appressed tomentum and the numerous, sessile, amber-colored glands almost completely hidden by the tomentum; midrib conspicuous above, prominent beneath; secondaries 5 or 6 pairs, parallel, conspicuous above, prominent beneath; tertiaries transverse, strong, numerous, parallel; inflorescence typical for the genus; corolla white, externally lightly pubescent, internally glabrous, the tube about 1.2 mm. long, the limb 4-lobed, the lobes about 1.5 mm. long and 1 mm. wide; stamens 4; filaments about 2.2 mm. long; anthers 0.5 mm. long; style about 2.5 mm. long, apically shortly bifid; ovary about 0.3 mm. long, externally glabrous; utricle ovoid, 2--3 cm. long, 1.5--2.5 cm. wide, acutely 4-angled, externally slightly pubescent or more usually glabrous or subglabrous; capsule obovoid, 4--5 mm. long, 3--4 mm. wide, externally fulvous-hirsute and glandulose, included within the utricle.

This species is based on Kerr 3011 from near Paknambo, Ban Dan, in Na Kawn Sawan province, Thailand, deposited in the Kew herbarium. Fletcher (1938) cites also Kerr 3626, 8411, & 20657 from Thailand. Kerr found it growing in deciduous forests and among limestone rocks, at 40--420 m. altitude. Thus far, this species is known only from these original collections. Fletcher (1938) also notes that it is "*H. siamensi* Craib affinis, sed tomento breviter vestita glandulis in foliorum pagina inferiore fere omnino abditis, utrinque fere glabro differt."

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ANNOUNCEMENT TO AUTHORS

Regretfully, due to several unfavorable decisions by the U. S. Internal Revenue Service, we shall have to abandon our 50-year-old policy of operating this journal on a cooperative basis with the authors. Beginning with Volume 51 it will be operated strictly on a policy of per-page charges to each author, payable at the time the typescript is submitted. Each author, however, will still receive gratis a proportionate share of the copies left over after paid subscription are filled. Separates or offprints, if desired in addition, will be charged for at the printer's current rate, plus postage/ handling, and must also be paid for in advance with submission of the typescript.

It is not expected that this change in policy will alter in any way our present record of very prompt publication of accepted, properly typed papers.

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